

Applicant: Ludwig Brehm  
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Docket No.: 1093-160PCT/US/RCE  
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### **REMARKS**

The Final Office Action mailed April 27, 2011 and the references cited therein have been carefully considered. Claims 2-18 and 29-57 are currently pending. By the amendments herein, Applicant has amended claims 2, 7-18, 29, 30, 32 and 45; canceled claim 4 and introduced new claim 58. It should be understood that new claim 58 is a rewritten form of now canceled independent claim 4. The introduction of new claim 58 reorganizes the method steps of claim 4 and eliminates redundant verbiage therein. Thus, support for new claim 58 can be found in canceled claim 4 and more generally throughout the specification. The amendments to claims 2, 7-18, 29 and 30 change the dependency of those claims to new claim 58, remove redundancies and ensure antecedent basis for the terms therein. Claims 32 and 45 are amended to eliminate the alternative of the irradiation operation being effected after application of the transfer film. Accordingly, no new matter has been introduced by the amendments presented herein.

Applicant responds below to the issues raised in the subject Office Action.

### **Claim Rejections under 35 USC § 112**

Claims 14, 32 and 45 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicant respectfully requests reconsideration. By the amendments presented herein, Applicant has reorganized the language of rejected claim 4 by introducing new claim 58. New claim 58 defines that “the hardened adhesive layer and the attached first portion of the magnetic layer remain attached to the first film body.” This is consistent with claim 14 that further defines that “the radiation-crosslinkable adhesive in a non-hardened condition has a lower

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adhesive force in relation to the magnetic layer than the adhesive force between the magnetic layer and the second film body.” Thus, when the radiation-crosslinkable adhesive is not hardened, the magnetic layer will tend to stick to the second film body more than the adhesive layer. Additionally, claims 32 and 45 are hereby amended to remove the “or after” alternative relating to when the irradiation occurs. Accordingly, it is believed that by the amendments herein, the rejections under 35 U.S.C. §112, second paragraph, have been rendered moot. Thus, Applicant respectfully requests withdrawal of these rejections.

### **Claim Rejections under 35 USC § 103**

Claims 4, 2, 12-18 and 29-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,491,324 to Schmitz et al. (**Schmitz**) in view of U.S. Patent No. 5,820,971 to Kaule et al. (**Kaule**) and Japanese Patent No. JP 363030843 to Uchiyama et al. (**Uchiyama**). The amendments presented herein to what was independent claim 4, by way of new claim 58 have rendered this rejection moot. Thus, Applicant respectfully requests reconsideration and withdrawal of this rejection.

In particular, the introduction of new claim 58 now further defines the “pattern form” previously recited in now canceled claim 4. In particular, the adhesive is defined as forming a first pattern, wherein a first portion of the magnetic layer is in direct contact with the first pattern and a second portion of the magnetic layer extends beyond the first pattern. The Office Action at paragraph 7, notes that a “pattern” can be the shape of the (entire) transfer film. However, this reading is not pertinent considering the way the first pattern is now defined in the claims in

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relation to the magnetic layer. Thus, the first pattern can no longer be interpreted as “the shape of the transfer film.” Also, Schmitz simply does not disclose or suggest applying the adhesive layer (9) to anything less than the entire surface of the magnetic layer (5). Thus, Schmitz fails to disclose all the elements of the claimed invention, particularly as defined by claim 58.

The invention according to Schmitz is based on the problem of proposing a security document with a security element which has a magnetic coating whose inherent color hardly appears in reflected light (column lines 57-61). This could be achieved by applying a security element as shown in Fig. 2, which comprises in addition to the magnetic layer (5) a semitransparent layer (6) being necessary for the intended function (see thereto claim 1, column 4 lines 23-37). The semitransparent layer is used to hide the magnetic layer in reflection. According to another design variant shown in Fig. 3 of Schmitz, the magnetic layer (5) is provided additionally with gaps (10) in the form of characters, patterns or the like so that these characters, for example, become visible when viewed in transmitted light. In this case, the layer (6) also serves to hide the gaps (10) when viewed in reflected light so that they virtually do not appear in reflected light (column 5 lines 16-29, and especially:

“...When viewed in reflected light, however, screen 6 additionally disguises gaps 10 so that they virtually do not appear.”

The functional principle of the design variants of Schmitz suggested by the subject Office Action relates to a security element which shows a first information when viewed in transmitted

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light, wherein the information is defined by the gaps (10) in the magnetic layer, and which does not show this information due to this layer (6) when viewed in reflected light.

Accordingly, Schmitz clearly does not teach or suggest applying an adhesive layer in pattern form. It is clear from the total context of the disclosure of Schmitz that the gaps in the form of characters represent information within a security element and that the different characters do not represent separate security elements. To achieve the desired effect of this design variant, it is absolutely necessary to provide the semi-transparent layer in regions where no magnetic layer is applied. Otherwise it would not be possible to achieve the function which is intended by the structuring of the magnetic layer that information being visible in transmitted light cannot be viewed in reflected light. In the event these regions were not transferred, the information would be visible both in transmitted light and in reflected light. Thus the teaching of Schmitz leads a skilled person away from applying an adhesive layer partially but rather induces a skilled person to provide the adhesive layer over the entire surface i.e. both in regions where the magnetic layer is provided and in regions where the magnetic layer is not provided.

Additionally, as admitted in the subject Office Action at page 6, paragraph 12, Schmitz does not disclose applying the adhesive layer to a first film body, while the magnetic coating is applied to a second film body. Such a process step, as particularly defined in claim 58, is not a mere rearrangement of parts, but rather elements of the claims that are not disclosed in the prior art. What is more, applying an adhesive layer in pattern form on a first film that is different from the film upon which the security element is applied requires the two separate films be joined in perfect register relation. This is a very different methodology from applying an all-over coating

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on top of the same substrate registered for application of an earlier sub-layer, such as the magnetic layer. These two alternatives are not equivalent and one of ordinary skill would not complicate the application method disclosed by Schmitz by adding additional alignment (registration) measures for the two films. Also, it is improper to use Applicant's own disclosure as a guide to arriving at the prior art. This aspect makes further evident that Schmitz fails to disclose or reasonably suggest all the elements of the claims, particularly as defined in claim 58.

Kaule teaches the application of a reactive adhesive layer (4), but like Schmitz also fails to disclose a patterned application of that adhesive layers covering less than the full underlying magnetic layer. Take for example Fig. 2 of Kaule that shows a screened application of a metal layer that covers less than the full area covered by the adhesive. Kaule thus also applies the adhesive layer in an all-over coating. What is more, the adhesive layer used in Kaule is activated by UV radiation. Thus, this adhesive layer develops its adhesive force only after UV activation and not a UV curable or cross-linkable adhesive (see column 5 lines 18-26). As shown in Fig. 3, irradiation of the adhesive is effected prior to applying the transfer film to the adhesive layer and not as now defined by claim 58. Even if one of ordinary skill where to consider combining Schmitz with Kaule, they would not be inspired to irradiate the adhesive layer after applying the transfer film to the adhesive layer. Thus, one of ordinary skill would be guided away from making such a combination.

With regard to Uchiyama, as best understood from the Abstract in connection with the drawings, the disclosure relates to: An adhesive layer (8) applied to the entire surface of a release paper (9). Afterwards a paper (7) which is provided with a pattern (6) is applied to the

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surface of the adhesive layer. The pattern apparently serves as a kind of shadow mask, so that in case that exposure to light is performed on the side where the pattern has been applied the regions of the adhesive which are located below the pattern are not exposed, and the regions which are not covered by the pattern (6) are exposed and cured. Accordingly the adhesive layer (8) remains on the pattern (6) when the release paper is removed and so can be used afterwards to transfer the pattern (6) to the target substrate. Thus, according to Uchiyama it is absolutely necessary that the layer to be transferred (pattern 6) must be already available in pattern form, as the layer to be transferred serves as mask for the exposure with light. Hence this process would not work if the layer to be transferred (pattern) has already been applied onto the entire area of the transfer film. Uchiyama discloses hardening the adhesive that is not adjacent a pattern, thus leaving only adhesive adjacent (meaning aligned to engage the pattern) the pattern left to later transfer to that pattern. Uchiyama would not reasonably lead one of ordinary skill to harden adhesive aligned to engage the pattern or part of the pattern in the form of a partial magnetic layer. Also, like Schmitz and Kaule above, Uchiyama discloses an all-over application of the adhesive layer, thus fails to suggest those elements of the claimed invention not reasonably taught by either Schmitz or Kaule.

Accordingly, any combination of Schmitz, Kaule and Uchiyama fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 58, 2, 12-18 and 29-31. Applicant thus respectfully requests reconsideration and withdrawal of the rejection of claims 4, 2, 12-18 and 29-31.

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Additionally, Claims 7-9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Uchiyama and further in view of U.S. Patent Publication No. 2004/0256986 to Yadav (**Yadav**). While Yadav is cited for teaching the use of magnetic nanoparticles, Yadav fails to disclose those missing elements of the claims noted above with regard to claim 58, from which claims 7-9 depend. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Yadav fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 7-9.

Further, Claims 10 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Uchiyama and further in view of European Patent Application No. EP 0953937 to Power et al. (**Power**). While Power is cited for teaching the use of amorphous metal glass, Power fails to disclose those missing elements of the claims noted above with regard to claim 58, from which claims 10 and 11 depend. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Power fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 10 and 11.

Further still, Claims 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and Uchiyama and further in view of WO 99/65699 to Harris et al. (**Harris**). While Harris is cited for teaching the use of intaglio printing, Power fails to disclose those missing elements of the claims noted above with regard to claim 58, from which claims 16 and 17 depend. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Harris fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 16 and 17.

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The further cited prior art fails to teach or reasonably suggest either the missing elements or the needed motivation or reason to arrive at the invention as defined by the claims.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 7-11, 16, 17 as noted above.

Further, Claims 3, 5, 32, 38-41, 45, 51-54 and 57 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule. Applicant traverses this rejection, particularly since it has been rendered moot by the amendment to claims 32 and 45. More particularly, since both claims 32 and 45 both define “an irradiation operation is effected prior to application of the transfer film.” The subject Office Action at page 19, paragraph 8, argues that Schmitz teaches irradiating to bond the security element to the first film body after application of the transfer film, which is clearly outside the scope of the amended claims. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 3, 5, 32, 38-41, 45, 51-54 and 57.

Additionally, Applicant objects to this rejection particularly since the Office Action at page 20, paragraph 9 relies on the teachings of Uchiyama, but fails to cite Uchiyama as a basis for the §103 rejection noted on page 16. The Office Action admits that Schmitz does not disclose the magnetic layer remains on the first film body where the adhesive is not hardened and is removed with the carrier film in the second region where the adhesive is hardened, and thus cites Uchiyama for this principle. However, regardless of the fact that Uchiyama was not part of the main rejection of independent claims 32 and 45, Uchiyama only discloses hardening adhesive not opposite the pattern present on the base substrate. This is not the same as hardening of only

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part of the adhesive that is opposite the pattern, as more particularly recited in claims 32 and 45.

What is more, contrary to the suggestion in the Office Action at page 21, paragraph 38, there is simply no teaching or suggestion in either Schmitz or Kaule to partially irradiate an adhesive layer prior to assembly of all the layers of the security element. In particular, Schmitz teaches selective activation only after all the layers are assembled, but not selective activation prior to application of the transfer film having a magnetic layer.

Further, claims 3 and 5 further define, in addition to the irradiation operation **prior to** application of the transfer film, exposing the adhesive in pattern form **after** application of the transfer film. Claim 5 more particularly defines “a second exposure step.” It should be noted that allowing an uncured adhesive to harden is not the same, nor can it be interpreted as the same as a subsequent or second irradiation. Thus, these further elements of the claims are not disclosed by the cited prior art. Similarly, claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and further in view of U.S. Patent Publication No. 2004/0190102 to Mullen et al. (**Mullen**). However, claim 6 depends from claim 3 and 5 and Mullen does not disclose a subsequent or second irradiation. Thus, the combination of Schmitz and Kaule and Mullen does not teach all the elements of claim 6.

Accordingly, any combination of Schmitz, Kaule, Mullen and even Uchiyama fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 3, 5, 6, 32, 38-41, 45, 51-54 and 57. Applicant thus respectfully requests reconsideration and withdrawal of the rejection of claims 3, 5, 6, 32, 38-41, 45, 51-54 and 57.

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Similarly, claims 33-35 and 46-48 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and further in view of Yadav. While Yadav is cited for teaching the use of magnetic nanoparticules, Yadav fails to disclose those missing elements of the claims noted above with regard to claim 32 or 45, from which claims 33-35 and 46-48, respectively depend. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Yadav fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 33-35 and 46-48.

Further, claims 36, 37, 49 and 50 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and further in view of Power. While Power is cited for teaching the use of amorphous metal glass, Power fails to disclose those missing elements of the claims noted above with regard to claim 32 and 45, from which claims 36, 37 and 49, 50 depend respectively. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Power fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 6, 37, 49 and 50.

Further still, claims 42, 43, 55 and 56 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schmitz in view of Kaule and further in view of Harris. While Harris is cited for teaching the use of intaglio printing, Power fails to disclose those missing elements of the claims noted above with regard to claim 32 and 45, from which claims 42, 43 and 55, 56 depend respectively. Accordingly, any combination of Schmitz, Kaule, Uchiyama and Harris fail to disclose or reasonably suggest all the elements of claimed invention, particularly as defined in claims 42, 43, 55 and 56.

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All these rejections fail for the same reasons set forth above with regard to the underlying rejection based on the combination of Schmitz and Kaule, and even Uchiyama. The further cited prior art fails to teach or reasonably suggest either the missing elements or the needed motivation or reason to arrive at the invention as defined by these claims. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 33-37, 42, 43, 46-50, 55 and 56.

### **Conclusion**

Entry of the amendments herein and favorable consideration of Claims 2, 3, 5-18 and 29-58 is hereby solicited. In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner has any questions or suggestions to expedite allowance of this application, the Examiner is cordially invited to contact Applicant's attorney at the telephone number provided.

Respectfully submitted,

/tony a. gayoso/  
Tony A. Gayoso  
Registration No.: 37,331  
Attorney for Applicant

HOFFMANN & BARON, LLP  
6900 Jericho Turnpike  
Syosset, New York 11791  
(516) 822-3550  
TAG:  
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